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IX.—*Remarks on Buschmann's Researches in North American Philology.* BY EDWARD B. TYLOR.

THE first volume of Buschmann's great work, entitled *Spieren der Aztekischen Sprache im Nördlichen Mexico*, &c., was published in 1859, and has been followed by a number of supplementary parts. The whole work, now nearly, if not quite complete, forms a systematic treatise on the languages of the western half of North America.

Some of the results of Mr. Buschmann's investigations are of great interest to ethnologists, and of these it is the object of the present paper to give some account.

In the late Mr. Albert Gallatin's map of the Indian tribes, which accompanies his synopsis, printed in vol. ii of the *Transactions of the American Antiquarian Society* (1836) the eastern and north-western parts of the North American continent are carefully mapped out. The Esquimaux family extends from the north-east to the north-west, forming a narrow strip along habitable parts of the coast line, and reaching across Behring Straits into Asia, as was shown to be the case by the authors of the *Mithridates*, in 1816. South of the Esquimaux, two great families are represented as dividing the continent down to about the level of the American lakes, the Algonquin or Delaware on the east, the Athapaskan towards the west, but not reaching so far as the Pacific coast. South of the Athapaskan, the Black Feet form another family of smaller extent, and a number of families, the Sioux, Iroquois, Cherokees, etc., occupy the rest of the eastern part of the continent.

Since the publication of Gallatin's map, the area of the Athapaskan family has been much extended. Mr. William W. Turner added to it the Apachs, inhabiting New Mexico, with whom are to be classed other tribes belonging to the same district, the Navajos, Xicarillas, etc., while Mr. Buschmann himself has brought into it a number of tribes in north-western America. As laid down by Buschmann, it forms an enormous triangle stretching from the Inkilik and Inkalit tribes of Norton's Sound some two or three hundred miles from the coast of Asia on the west, nearly to Hudson's Bay on the east, and south into the territory of the Apaches and Navajos in New Mexico, a space which may be roughly compared to a triangle, extending from Iceland to Moscow, and terminating southwards in the kingdom of Fez.

Buschmann's *Systematic Vocabulary of the Athapaskan Languages* (1860), comprises no less than twenty-four, of which a list is given at p. 544. Some of the principal of these are: in Gallatin's old Athapaskan district, the Chepewyans, Dog-ribs,

Beavers, Loucheux, Sussees, Carriers, etc. ; in the north-west, the Inkilik, Inkalit, Kinai, Ugalyachmutzi, etc. ; and in northern Mexico the Apaches, Navajos, Xicarillas, etc. The language of the Kòluches, in Russian America, has many words in common with some of the Athapascan languages, and is, therefore, often referred to ; but Buschmann considers it to be originally independent.

South of the Athapascan family, but over-lapping it over a large tract of country in the north of Mexico, lies Buschmann's Sonora family. As early as 1645, father Ribas asserted, in a general way, that the languages of the province of Cinaloa, contained Aztec analogies, both in words and grammar ; and in 1816 the authors of the *Mithridates* proved this to be the case, as regards the Cora and Tarahumara languages, by the publication of lists of compared words. Following up the investigation with better materials and superior technical knowledge, Buschmann added to these two, two other languages of the same district, the Zepequana and Cahita, giving the group thus formed, the name of the Sonora family (Sonorische Sprachstamm), from the Mexican province of Sonora, in or near which the tribes speaking these languages were located.

The Tarahumaras were discovered by a Jesuit missionary, in 1614. They were of a gentle and peaceable disposition, were easily converted to Christianity, but a few years afterwards returned to their old superstitions. They were in the habit of burying their dead with all their goods and chattels, and with provisions for their journey, and of burning the houses the deceased had lived in. The author who gives this account (Alcedo), says, however, rather inconsistently, that they dwelt in great caves. They lived in continual fear of their neighbours, the Tepeguanas, who were a fierce race living in huts. These Tepeguanas, who also belong to the Sonora family, were converted to Christianity, but relapsed shortly afterwards and murdered two hundred Spaniards who had settled among them.

The wild mountainous country of the Coras was never visited by white men till 1718, and the Spaniards found there, in a cavern, an idol and a place for offering human sacrifices, and they conveyed the idol to the city of Mexico, and burnt it with all due solemnity in the square of the Inquisition.

Taking these four languages as a basis, and guided in his researches by the occurrence of words resembling the Aztec, Mr. Buschmann added to the Sonora family a number of other languages, the Tubar, Hiaqui, Eudeve, and Opata, in Sonora, and its neighbourhood, which require no particular notice.

In north-western Mexico, however, there are two tribes inhabiting the neighbourhood of the Río Gila, which are of con-

sidable importance ethnologically. These are the Pimas and Moquis, whom Mr. Buschmann finds to belong to the Sonora family.

Mr. Froebel, who travelled in this district, was very favourably impressed by the Pimas. He speaks with admiration of their personal beauty and gentle disposition, adding that they "unite such decided courage with these peaceful and amiable qualities, as to inspire even the savage Apaches with respect." "I believe," he says, "that the character of the aboriginal Americans can be seen to such advantage among none of the remaining tribes."

In the district of the Rio Gila are found those remarkable ruins, known under the general name of Casas Grandes, "great houses," which indicate that the country was once inhabited by a much more civilised race than has existed there in modern times. These ruins, since their first discovery, have been claimed as the work of the Aztecs, during their migration southwards to the valley of Mexico, recorded in their legends. Mr. Buschmann's discovery of a decided Aztec element in the language of the tribes inhabiting the district, has, of course, a most important bearing on the question.

Leaving Mexican territory, we find a new member of the Sonora family in the tribe of Utahs, of Great Salt Lake, the seat of the remarkable Theo-democracy of Deseret, a word which, by the way, the Latter-Day Saints hold to be a mystical word, meaning "the land of the honey-bee;" but which Mr. Buschmann considers to be nothing but "desert," a little lengthened out. The word Mormon itself, is derived by the saints from Gaelic and a Teutonic dialect and said to signify "great good," while Mr. Buschmann himself reminds us that *μωρμων* is Greek for a boggy.

The member of the Sonora family, which has most political importance, is the dreaded tribe of the Comanches. In all the part of northern Mexico, within hundreds of miles of the districts of New Mexico and Texas, inhabited by the Apaches and Comanches, the spectacle, happily not common in modern times, of civilized man standing helpless and defenceless before the barbarian, is still to be seen. Year after year detachments from these two tribes sweep down upon the Mexican villages, burning and plundering, murdering the men, carrying off the women and girls for wives, and the boys to train up into wild men of the prairie, more fierce and cruel even than their adoptive parents. Fortunately for the Mexicans, the two great tribes of their persecutors are not united. A permanent alliance between them would probably result in the total disappearance of civilization, in a great part of northern Mexico.

It is curious to observe, that the two tribes, though inhabiting the same country and resembling one another in their habits much more than most of the tribes with which they are ethnologically connected, are representatives of the two great races of Western North America. The Apaches are Athapascans, while the Comanches are Sonorans.

The utmost northern limit to which the Sonora family can be traced, is the neighbourhood of the sources of the Missouri, about 45° north latitude, where the Shoshonees or Snake Indians were to be found, till their enemies, the Blackfeet, obtained firearms from the Hudson's Bay Company, and drove them further south. The Sonora family has its lowest representatives in the miserable Digger Indians, closely connected with the Shoshonees. In America, the name "Digger Indian," is commonly used as a term to express the lowest degradation of which man is capable. Of the Diggers, or "gens de pitié," as the French trappers call them, it is said that they "nearly starve to death annually, and in winter and spring are emaciated to the last degree; the trappers used to think they all eventually died from starvation as they became old and feeble. In salmon time they get fat." Of the Root-Diggers in Utah, captain Stansbury, the explorer of the Great Salt Lake district, says that they are the most degraded and "the lowest in the scale of being" of any Indians he had seen. They live on lizards and crickets, and wild roots and seeds bruised between two stones.

Of the other languages of tribes belonging to the Sonora family, the Kizh and Netela in New California and the Chemehuevi, Cahuillo, and Kechi, as well as of a number of subordinate Sonoran dialects in various parts, nothing need be said.

Through all the series of Sonora languages, words evidently to be referred to the Aztec, such as led Mr. Buschmann to the discovery of the family itself, are to be traced, more or less, distinctly. Now, if it could be proved that the Sonoran languages belong to the same family as the Aztec, a result of the greatest importance to American ethnology would follow. We should have evidence going far to prove that the classification which divides the native population of North America into two well-defined sections is not founded on an original difference of race. The line of demarcation seems a broad and strong one, between the men capable, not only of mixing with European races and co-existing with them, but even of raising themselves to that state which American ethnologists call semi-civilization, and those with whom the experiment of imparting European culture has been a total failure, and who die out whenever white men come within reach of them. Of these two classes, it would be hard to find better specimens than the Aztec and the Comanche; and yet

if they could be proved to speak languages belonging to the same family, we should be justified in considering it, at least, probable that they are kindred races.

Mr. Buschmann, however, does not consider the mass of Aztec resemblances, both lexicographical and grammatical, which he shows to exist in the Sonoran languages, as a proof of relationship. He puts the question distinctly, and answers it in the negative. "The Aztecs or some other family of the Nahuatlacs," he says, "have at some time come forth out of the society of Sonora-Cinaloan or other tribes, after living long in their society and exercising upon their languages a deep characteristically American influence, of a kind hitherto hardly observed anywhere." But the difficulty he feels in adopting this theory, is sufficiently shown by his speaking of such an action of one language upon a family of others, as "a philological phenomenon of astounding abnormality and novelty;" while on the other hand, he looks upon the objection to the theory of common origin as insuperable.

Without going deeply into the subject, it will be worth while to give some account of the Aztec affinities in the four principal Sonoran languages. In the first place, a number of names relating to social life and the arts, etc., such as *teoquito*, silver (Aztec, *teocuitlatl*); *tatoani*, governor (Aztec, *tlatoani*); *calè*, house (Aztec, *calli*), etc., etc. Such words as these are so usually taken by one language from another, that they prove nothing whatever as to relationship, especially as there is plenty of evidence to prove the possibility of close intercourse between the two peoples having taken place. In the second place, words, such as *coyote*, jackal, *nopal* (the prickly pear), etc., do not even prove intercourse, for they are Mexican words adopted by the Spaniards, and evidently spread by them. There is a third class, however, which is of very different philological weight from the two first, substantives, such as moon, fire, wind, water, flower, herb, reed, tree, snake, stag, rabbit, eagle, head, nose, ear, lip, etc., etc., which are found in the Sonoran languages expressed by words resembling their Aztec equivalents, and verbs, such as to wish, to sleep, to die, to be sick, to eat, to hear, to sing, etc., etc., are found to resemble the Aztec more or less closely; some of them, as *mati*, to know; *nuqui*, to die, etc., ramifying into a perfect net-work of analogies.

It is not easy to suppose such deeply rooted resemblances as these, to have been the result of mere intercourse; and we may perhaps hesitate to consider Mr. Buschmann's decision as final, especially when we remember that the materials for the study of most of the Sonoran languages are of a very incomplete and fragmentary kind, and may be greatly enlarged at a future time.

Mr. Buschmann considers his Sonoran discoveries to bring

strong confirmation of the commonly received theory of the migration of the Aztec and kindred races from the north-west. Indeed, so great a mass of evidence has now been collected, that this event becomes one of the best established points in the aboriginal history of America. The legends of the Mexicans themselves, the mention by historians of tribes speaking Aztec in the north and north-west of Mexico (see Buschmann, i, p. 54, etc.), the existence of Aztec names in the geography of the same districts (a subject worked out by Buschmann with great labour, see i, p. 58, etc., *Azt. Ortsnamen*, § 34-40), some specially Aztec customs noticed among the Indians of north-western Mexico, the district of Rio Gila, etc., and lastly, the Aztec element in the Sonoran languages, unite in favour of the north western origin of the Nahuatlac nations. This was a favourite subject with Baron Alexander von Humboldt, and it seems to have been Mr. Buschmann's connexion with him and his brother Wilhelm, which led him to devote so much labour to its elucidation. His present work is a mine of information, collected from the most varied sources, as well as of original researches on the origin of the Aztecs.

The distance from the city of Mexico to the present land of the Shoshonees, the most northerly Sonoran tribe, is some 1700 miles in the north-west direction, and beyond this point, the Aztec words to be found in Indian languages are too few and uncertain to be of any weight in our ethnological argument.

Measuring to rather a shorter distance from the city of Mexico, in nearly an opposite direction, we reach the southern limit of the Aztec language, among an isolated family of Indians, in the neighbourhood of the lake of Nicaragua, and on the islands in it.

If an example were wanted of the permanence of American languages under favourable circumstances, it would be hard to find a better one than the short list of words obtained by Mr. Squier, the American archæologist, from the island of Ometepe (Aztec, "two mountains," from its two volcanic peaks), in the lake of Nicaragua (see *Transactions of the American Ethnological Society*, vol. iii). A separation of at least three or four centuries from the main body of the Aztec race, has produced only a very slight change in the twenty-four words collected by Mr. Squier, except in the moveable terminations which have been generally mutilated or removed; coatl, snake, becoming coat; atl, water, becoming at, etc. The wonderful permanence of the Aztec language is acknowledged by Mr. Buschmann, who considers it to account for the fact, that while, according to his theory, its contact was producing such extraordinary effects upon the Sonoran languages, they were unable to exert any reciprocal action whatever upon it.

Of course the permanent character of the Aztec language, is no argument for the existence of the same quality in the Sonoran family, especially when we consider under what different social conditions they lived; but we may observe that the theory of the connexion between the Sonoran languages and the Aztec, which Mr. Buschmann has felt himself obliged to adopt, leads him so far in the other direction, as to compel him to assent, though timidly, to the proposition, that it is easy to the inhabitants of the new world to incorporate foreign elements, both intellectual and material, into their languages, and to alter them inwardly and outwardly, as it were, by mere caprice (see i, p. 9). It is to be hoped that this most important question may be further investigated by philologists.

X.—*Some additional Observations on a collection of Human Crania and other human bones, at present preserved in the crypt of a church at Hythe, in Kent.* By ROBERT KNOX, M.D., Hon. F.E.S.; Corresponding Member of the Imperial Academy of Medicine of France; Foreign Associate of the Anthropological Society of Paris; and of the Natural History Society of Hesse Cassel, etc., etc.

DURING the session 1860-61, I read a memoir to the Society, on a collection of crania, preserved in the crypt of a church at Hythe, in Kent, which memoir the Society published in part ii, vol. i, of the new series of their *Transactions*. I now return to the subject of these crania, after having re-examined them with some care.

Of the various theories offered, as to how these crania came to be collected, I gave a preference, after mature consideration, to that of their being the remains of men who had fallen in battle; who had never been interred singly in graves, but had been buried in a heap, perhaps after long exposure in the open air, and this implied that they were the remains of an enemy slain in fight.

The reasons for this preference were: 1st. The bones, with few exceptions, do not resemble what we call church-yard bones; their condition refuting such an idea. 2nd. They seem to be chiefly the bones of adult men—men in the prime of life. Had they been merely church-yard bones, collected at various times, or disinterred at any one period, it must be obvious that in the collection there would be numbers in a state of decay, as well as the remains of women and young persons of all ages. Now, nothing of the kind occurs. The conjecture was thrown out in the dis-